

**UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK**

TOWN OF GREENBURGH,

Plaintiff,

vs.

SPECTRASERV, INC., and LIBERTY
MUTUAL INSURANCE COMPANY,

Defendants.

SPECTRASERV, INC., and LIBERTY
MUTUAL INSURANCE COMPANY,

Third-Party Plaintiffs,

vs.

M.G. McLAREN, P.C., and DOLPH
ROTFELD ENGINEERING, PC,

Third-Party Defendants.

Civil Action No. 07-CV-6966 (WCC)

**DECLARATION OF STEVE KULCSAR
IN OPPOSITION TO MOTIONS**

Steve Kulcsar hereby declares the truth of the following under the penalties of perjury and pursuant to 28 U.S.C. §1746:

1. I am a Vice-President of Spectraserv, Inc. ("Spectraserv") and am fully familiar with all of the matters hereinafter set forth. I make this declaration in opposition to the motions made by the third-party defendants which seek summary judgment and dismissal of Spectraserv's Third-Party Complaint.

2. On June 22, 2000, Spectraserv entered into a contract ("the Contract") with The Town of Greenburgh ("Greenburgh") for the construction of a ten million gallon per day water

pumping station with a 500,000 gallon rectangular concrete tank ("the concrete tank"). Spectraserv's general construction work also included a 3,200 square foot masonry building, a tap on the New York City Catskill Aqueduct, and site work, and is collectively referred to as "the Project".

3. Greenburgh also entered into a contract with a consulting engineer, third-party defendant Dolph Rotfeld Engineering, PC ("Rotfeld") to perform, among other things, design, construction management and inspection services on the Project. The Greenburgh/Rotfeld contract has not been made available to Spectraserv, nor was a copy attached to Rotfeld's motion papers.

4. Rotfeld, in turn, entered into a written contract with M.G. McLaren, P.C. ("McLaren"), to provide "structural design services for the referenced project". A copy of the Rotfeld/McLaren contract is annexed to McLaren's motion papers as Exhibit 1. Among other things, this contract obligated McLaren to provide sealed structural drawings, showing all structural steel and concrete work, and containing material and performance specifications for the concrete tank. The Rotfeld/McLaren contract also assigned to McLaren substantial construction administration responsibilities. In addition to these services, for which McLaren billed at a lump sum price, the Rotfeld/McLaren contract states that McLaren would perform additional functions, billable at hourly rates. These additional functions included controlled inspection of construction, review and approval of alternate framing designs, design of piping or mechanical connections, revisions, site visits during construction, design of pile foundation system, and review and advice on the disposition of the Contractor's (Spectraserv's) change orders.

5. The General Conditions of the Contract between Greenburgh and Spectraserv also define the responsibilities of the consulting engineer(s) retained by Greenburgh to perform construction management and inspection duties. (Copies of the relevant sections of these General Conditions are annexed hereto as Exhibit A).

6. In the following sections, the General Conditions of the Contract provide that:

111. The Engineer shall prepare an estimate of the work performed for partial payment as of a mutually agreed upon date at least 30 days after the beginning of work, and approximately every 30 days thereafter.

117. The Engineer will decide all questions which may arise in relation to the work and the construction thereof. The Engineer's estimates and decisions shall be final and conclusive, except as herein otherwise expressly provided. In case any question shall arise between the parties hereto relative to said Contract, the determination or decision of the Engineer shall be a condition precedent to the right of the Contractor to receive any money or payment for work under this Contract affected in any manner or to any extent by such question.

131. All materials and workmanship shall be subject to inspection, examination or test by the Owner and the Engineer to determine the acceptability of the work at any and all times during manufacture or construction
....

7. On June 29, 2000, Spectraserv commenced its work under the Contract. Spectraserv performed all of its work in accordance with the plans, specifications and other design documents furnished to it by Greenburgh. All of the design documents were prepared by Rotfeld and McLaren ("the Engineers"); Spectraserv did not design any portion of the Project.

8. Spectraserv's construction of the concrete tank was completed in December 2001. The concrete tank was not tested, however, until it was filled with water and pressurized in October 2002. When the concrete tank was filled with water, cracks and leaks were observed. At the request of Greenburgh, Spectraserv attempted to repair the leaks, first with an epoxy coating system and then with injection grout, all to no avail.

9. On August 4, 2003, Spectraserv hired FAZE Structural Engineers and Detailers, Inc. ("FAZE") to perform an investigation of the structural integrity and serviceability of the concrete tank.

10. In the course of its investigation, FAZE conducted site inspections and reviewed McLaren's record drawings of the concrete tank. FAZE additionally requested that McLaren provide its original design calculations; however, McLaren stated that it could not provide them because they had been lost.

11. The third-party defendants, in support of their purported statute of limitations defense, have alleged that they performed no services related to the Project, and had no professional relationship with Spectraserv, after March 26, 2004, the last date on which McLaren alleges that it visited the site and prepared a Field Report. This is simply untrue. Throughout 2004 and 2005, both Rotfeld and McLaren continued working to rectify the problems with the concrete tank that were caused by their own defective design. Among other things, several meetings were held at the Town Hall in Greenburgh, and the parties participated in a conference call, for the specific purpose of discussing creative and practical solutions to these problems. Representatives of Greenburgh, Spectraserv, Rotfeld and McLaren were present for each of the meetings. I attended each meeting on behalf of Spectraserv. For example:

a. At the meeting with Greenburgh on August 17, 2004, Malcolm McLaren and W. Richard Mahoney represented McLaren. Dolph Rotfeld represented Rotfeld. Spectraserv introduced two structural engineers, Vincent Feygin and Margaret Zaslavsky from FAZE, who summarized their investigation and findings that the failure of the concrete tank was solely due to defects in the Engineers' design. (A copy of FAZE's Summary of Findings is annexed

hereto as Exhibit B). McLaren summarily rejected FAZE's conclusions at that time and stated that its original calculations had been done properly. FAZE was unable to verify McLaren's original calculations because they had been lost by McLaren.

b. At the meeting on July 13, 2005, Malcolm McLaren and W. Richard Mahoney again represented McLaren. Dolph Rotfeld represented Rotfeld. Both Rotfeld and McLaren commented upon the FAZE proposal, and made proposals of their own, asking Spectraserv to look into the cost of implementing them.

c. A conference call was conducted by Greenburgh on November 17, 2005. W. Richard Mahoney represented McLaren, and Dolph Rotfeld represented Rotfeld. During the call, we discussed Spectraserv's estimate for the cost of Rotfeld's proposal, variations suggested by McLaren to the Rotfeld proposal, and other potential solutions for the concrete tank cracks and leaks.

12. In addition, as noted above, pursuant to the General Conditions in the Contract (annexed hereto as Exhibit A), the Engineers' responsibilities included inspection, examination and testing of the Contractor's (Spectraserv's) materials and workmanship, and the Engineers' determinations were a condition precedent to the right of the Contractor to receive payment from Greenburgh. At the end of August 2005, Spectraserv submitted its Application and Certification for Payment No. 12, for work performed through August 31, 2005, requesting payment in the amount of \$94,389.89. After review and approval of this payment application by Rotfeld and/or McLaren, in accordance with the General Conditions, Greenburgh issued its payment to Spectraserv in the amount of \$93,439.89. (Copies of the Application and Certification for Payment No. 12 and Greenburgh's check stub are annexed hereto as Exhibit C.) The payment was received by Spectraserv on November 7, 2005.

13. Thereafter, Spectraserv repeatedly demanded that Greenburgh pay it the unpaid balance (\$173,100.80) of its contract sum, since Spectraserv had completed all of the work required of it under the Contract, in accordance with the plans and specifications that were provided to it by Greenburgh. Spectraserv advised Greenburgh that, as confirmed by FAZE's findings, the cracks and leaks in the concrete tank were not the result of any deficiency in Spectraserv's performance, but were the result of defective design by either Rotfeld or McLaren.

14. Most recently, at a meeting at the Greenburgh Town Hall on November 29, 2007, Spectraserv renewed its demand for payment of the retainage (\$173,100.80). Greenburgh's representative advised me that it had no intention of paying Spectraserv any additional sums, based upon the advice of its Engineers that the cracks and leaks were not caused by any deficiency in their design, and therefore must have been caused by construction defects attributable to Spectraserv. Under the circumstances, it is disingenuous for Rotfeld and McLaren to allege that their involvement with the Project, and their professional relationships with Greenburgh and Spectraserv, ended in 2000 or 2004.

15. Both Rotfeld and McLaren mislead the Court if it is their position that they had no relationship at all with Spectraserv, or that their undeniable relationship with Spectraserv did not rise to the level that would create a duty of care. The Engineers knew that their design documents would be used and relied upon by Spectraserv in connection with every aspect of the Project. During the initial construction phase, and thereafter when cracks and leaks were observed in the concrete tank, the Engineers communicated directly with Spectraserv with regard to causation and resolution of the perceived problems. Indeed, the Field Reports that are annexed to McLaren's motion papers as Exhibits 3 -7 indicate that Spectraserv representatives

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were present at all but one of the Engineers' field investigations and assisted the Engineers in the testing procedures that were conducted. (Greenburgh's Complaint against Spectraserv is based upon these field investigations and Field Reports. See Greenburgh's Complaint, paragraphs 10 – 14, which is annexed to the Declaration of McLaren's counsel as Exhibit "A".)

16. Furthermore, all of the additional work performed by Spectraserv on the Project was subject to the design, inspection, examination and testing of the Engineers, and payment for such additional work was, in accordance with the General Conditions (see Exhibit A) subject to the Engineers' approval.

I declare under penalty of perjury that the foregoing statements made by me are true and correct.

Executed on July 31, 2008.


STEVE KULCSAR

EXHIBIT “A”

TOWN OF GREENBURGH/ VILLAGE OF IRVINGTON CATSKILL AQUEDUCT PUMP STATION

**CONTRACT NO. 1 – GENERAL CONSTRUCTION
CONTRACT NO. 2 – ELECTRICAL WORK**

**TOWN OF GREENBURGH
WESTCHESTER COUNTY
NEW YORK**

Prepared By:
The Town of Greenburgh
Department of Public Works
Bureau of Engineering
P.O. Box 205
Elmsford, NY 10523
(914)-993-1583



NOTE: The headings of the articles herein are intended for the convenience of reference only and shall not be considered as having any bearing on their interpretation.

GENERAL CONDITIONS

PART 1

101 DEFINITIONS

Whenever used in any of the Contract Documents, the following meanings shall be given to the terms herein defined:

- a. The term "Contract" means the Contract executed by the Owner and the Contractor.
- b. The term "Owner" means the Town of Greenburgh, which is authorized to undertake this Contract.
- c. The term "Contractor" means the person, firm or corporation entering into the Contract with the Owner to perform and complete the work involved in this Contract.
- d. The term "Subcontractor" means a person, firm or corporation supplying labor and materials or only labor for work at the site of the project for, and under separate contract or agreement with the Contractor.
- e. The term "Project Area" means the area shown on the drawing in the immediate vicinity of the work, unless otherwise defined in the Special Conditions. No private property is included unless the Town has obtained an easement.
- f. The term "Engineer" means the Town Engineer of the Town of Greenburgh, or such of his subordinates or assistants as have Project Engineer status: or if a Consulting Engineer is employed to perform construction management and inspection then this term Shall apply to said Consulting Engineer and those subordinates and assistants that have Project Engineer status. A list of authorized Project Engineers will be furnished to the Contractor on request.
- g. The term "Town" means the Town of Greenburgh, New York, within which the Project Area is situated.
- h. The term "Contract Documents" means and shall include the Documents listed in Article 3 of the Agreement.

111 PAYMENTS TO CONTRACTOR

a. Partial Payments

1. The Engineer shall prepare an estimate of the work performed for partial payment as of a mutually agreed upon date at least 30 days after the beginning of work, and approximately every 30 days thereafter. The amount of the payment due the Contractor shall be determined by adding the total value of work completed to date and deducting (1) five percent (5%) of the total amount, to be retained until final payment and (2) the amount of all previous payments. The total value of work completed to date shall be based on the estimated quantities of work completed and on the unit prices, if any, contained in the Agreement.

There will be no payments or partial payments to the Contractor for materials purchased and stored/stockpiled on the project site.

2. Monthly or partial payments made by the Owner to the Contractor are monies advanced for the purpose of assisting the Contractor to expedite the work of construction. All material and completed work covered by such monthly or partial payments shall remain the property of the Contractor and he shall be responsible for the care and protection of all materials and work upon which payments have been made. Such payments shall not constitute a waiver of the right of the Owner to require the fulfillment of all terms of the Contract and the delivery of all improvements embraced in this Contract complete and satisfactory to the owner in all details.

b. Final Payment

1. After final inspection and acceptance by the Owner of all work under the Contract, the Contractor shall prepare his requisition for final payment which shall be based upon the carefully measured or computed unit prices stipulated in the Agreement. The total amount of the final payment due the Contractor under this Contract shall be the amount computed without retainage less all previous payments. Final payment to the Contractor shall be made subject to his furnishing the Owner with a release in satisfactory form of all claims against the Owner, arising under and by virtue of his Contract, other than such claims, if any, as may be specifically excepted by the Contractor from the operation of the release as provided elsewhere herein.

2. The Owner, before paying the final estimate, may require the Contractor to furnish releases or receipts from all subcontractors having performed any work and all persons having supplied materials, equipment (installed on the Project) and services to the Contractor, if the Owner deems the same necessary in order to protect its interest. The Owner, however, may if it deems such action advisable, make payment in part or in full to the Contractor without requiring the furnishing of such releases or receipts of any payment so made shall in no way impair the obligations of any surety or sureties furnished under this Contract.
3. The Contractor shall furnish a maintenance bond in full amount of the Contract plus change orders, if any, to guarantee his work for a period of one (1) year from the date of final payment.
4. If it was necessary for the Owner to expend money for labor, materials or equipment on this project because the Contractor failed to perform satisfactorily or promptly, and a bill for such sum remains unpaid, the Owner may deduct this sum from partial payments or the final payment. Furthermore, if the specifications provide for certain work to be done by the Owner with the fee or cost to be borne by the Contractor, and a bill for such services remains unpaid, the Owner may deduct this sum from the partial or the final payment.
5. Withholding of any amount due the Owner under the section entitled "LIQUIDATED DAMAGES" shall be deducted from the final payment due the Contractor. At the Owner's option, liquidated damages may be deducted from any partial payment.

c. Withholding Payments

Notwithstanding the above, the Owner may withhold from any payment otherwise due the Contractor so much as may be necessary to protect the Owner and if it so elects may also withhold any amounts due from the Contractor to any Subcontractors or material dealers, for work performed or material furnished by them. The foregoing provisions shall be construed solely for the benefit of the Owner and will not require the Owner to determine or adjust any claims or disputes between the Contractor and his Subcontractors or material dealers, or to withhold any monies for their protection unless the Owner elects to do so. The failure or refusal of the Owner to withhold any monies from the Contractor shall in no way impair the obligations of any surety or sureties under any bond or bonds furnished under this Contract.

d. Payments Subject to Submission of Certificates

Each payment to the Contractor by the Owner shall be made subject to submission by the Contractor of all written certifications required of him and his Subcontractors by the Section entitled CONTRACTOR'S CERTIFICATES under the GENERAL CONDITIONS.

112 CHANGES IN THE WORK

- a. The Owner may make changes in the work required to be performed by the Contractor under the Contract by making additions thereto, or by omitting work therefrom, without invalidating the Contract.
- b. Except for the purpose of affording protection against any emergency endangering life or property, the Contractor shall make no change in the materials used or in the specified manner of constructing and/or installing the improvements or supply additional labor, services or materials beyond that actually required for the execution of the Contract, unless in pursuance of a written order from the Owner authorizing the Contractor to proceed with the change. No claim for an adjustment of the Contract price will be valid unless so ordered.
- c. The Contractor agrees to perform any of the aforementioned changed work, along with all other required work found under the Contract, without delay and in accordance with good construction practices.
- d. These changes outlined above may be made without relieving or releasing the Contractor from any of his obligations under the Contract provisions, and without affecting the validity of the guaranty bonds, and without relieving or releasing the surety or sureties of said bonds. All such work shall be executed under the terms of the original Contract unless it is provided otherwise.
- e. All adjustments to the Contract payment provisions will be made in accordance with the following paragraphs.
- f. If applicable unit prices are contained in the Agreement (established as a result of either a Unit Price Bid or a Supplemental Schedule of Unit Prices), the Owner may order the Contractor to proceed with desired changes in the work, the value of such changes to be determined by the measured quantities involved and the applicable unit prices specified in the Contract. Payment for unit price overruns, due to change orders, may be withheld until Town Board approval is obtained.

- g. If applicable unit prices are not contained in the Agreement, the Owner shall, before ordering the Contractor to proceed with desired changes, request and itemized proposal from him covering the work involved in the change after which the procedure shall be as follows:
 - 1. If the change in the work involves additional work, the procedure shall be as follows:
 - (a) If the proposal is acceptable, the Owner will prepare the Change Order in accordance therewith for acceptance by the Contractor; or
 - (b) If the proposal is not acceptable and prompt agreement between the two parties cannot be reached, the Owner may order the Contractor to proceed with the work on a Cost-Plus Basis. A Cost-Plus Basis is defined as the net cost of the work to the Contractor plus an allowance to cover overhead and profit as stipulated below:

"Net cost of the work" is defined as (1) gross cost of labor plus (2) net cost of materials plus (3) gross cost of equipment.

- (1) "Gross cost of labor" is defined as net cost of labor plus fringe benefits.

"Net cost of labor" is defined as the cost of required labor based on the prevailing rates established by the State Labor Department and stated in the Contract Document. No part of any salary for employees above the grade of foreman, and having general supervision of this work, will be included in this item.

"Fringe benefits" are defined as all insurances, taxes and other benefits for the employee required by law or by union contract. In lieu of an item-by-item determination of the actual value of such fringe benefits, all fringe benefits are hereby determined to total an amount of 40% of net cost of labor, and the Contractor in submitting his bid agrees that this percentage shall be used, regardless of whether actual fringe benefits are more or less than this amount.

- (2) "Net cost of materials" shall be defined as the cost of all materials incorporated in the work, including delivery charges, less any allowable cash discounts, as shown by receipted bills.

- (3) "Gross cost of equipment" is defined as the "net cost of equipment" plus an allowance of 10% for fuel and lubricants.

"Net cost of equipment" shall be defined as a rental rate which is reasonable and based on rental rates prevailing in the area where the work is to be done. Such rental rate shall be negotiated, and shall be agreed upon in writing before the work is begun. However, in no case shall the rental rates exceed the rates set forth in the current edition of the "Associated Equipment Distributors Compilation of Rental Rates for Construction Equipment."

The cost of furnishing small tools and accessories and materials used for construction but not incorporated in the work shall be considered as part of the Contractor's overhead, and shall not be included in the "net cost of the work."

An allowance of 15% will be added for overhead and profit to "gross cost of labor" and "Net cost of Materials" and is hereby stipulated to be in lieu of an actual determination of overhead and profit. The Contractor in submitting his bid agrees that this allowance shall be used, regardless of whether actual overhead and profit is more or less than this amount.

No percentage for overhead and profit shall be added to the amounts of equipment rental prices agreed upon, but the price agreed upon shall be the total compensation allowed for use of such equipment.

2. If the change in the work requires a reduction in the work involved, the procedure shall be as follows:
 - (a) If the proposal is acceptable, the Owner will prepare the Change Order in accordance therewith for acceptance by the Contractor; or
 - (b) If the proposal is not acceptable and prompt agreement between the two parties cannot be reached, the Engineer shall fix the cost value of the credit. The Owner may then order the Contractor to proceed with the work. Should the Contractor disagree with the cost value of the credit as fixed by the Engineer, he may appeal the same in accordance with the procedures outlined in the GENERAL CONDITIONS.

- h. Each Change Order shall include in its final form:
 - 1. A detailed description of the change in the work.
 - 2. The Contractor's proposal (if any) or a confirmed copy thereof.
 - 3. A definite statement as to the resulting change in the Contract price and/or time.
 - 4. The statement that the Change Order is subject to the approval of the Town Board.
- i. Contractor shall not take advantage of any obvious error in the specifications or any such error in the drawings or other Contract Documents. Any obvious error or discrepancy in or between any of the Contract Documents shall be immediately reported to the Engineer who shall make such corrections and interpretations as may be deemed necessary for the completion of the work in a satisfactory and acceptable manner.
- j. Change Orders shall in general be in writing. If a Contractor claims that a change order was given to him orally, his claim shall be invalid unless such oral change order was given by an authorized Engineer as defined in Section 101f. of this Contract, and further unless such oral change order was confirmed in writing within 24 hours of the giving of the alleged oral change order.
- k. When change orders, or claims involve a Subcontractor, no surcharge will be allowed the Contractor for handling, processing, supervision, or coordination.

113 CLAIMS FOR EXTRA COST

- a. All claims between the parties, including all claims for additional compensation and/or additional time, arising out of, or in any way related to this Contract and/or the performance of the same, or its interpretation shall within ten (10) days of the event or action giving rise to the claim be presented to the Engineer. All pacers pertaining to claims shall be filed in quadruplicate. Such notice need not detail the amount of the claim but shall state the facts surrounding the claim in sufficient detail to identify the claim, together with its character and scope. In the meantime, the Contractor shall proceed with the work as directed. Any claim not presented within the time limit specified in this paragraph shall be deemed to have been waived, except that if the claim is of a continuing character and notice of the claim is not given within ten (10) days of its commencement, the claim will be considered only for a period commencing ten (10) days prior to the receipt by the Engineer of notice thereof. The Contractor shall in no case allow any claim or dispute to delay the work.

- b. As soon as practicable after the final submission of all information the Owner shall make a determination of any claim. Said decision of the Owner shall be a condition precedent to any further action on the claim. However, upon certification in writing by the claimant that the claim has been submitted in its final form, the Owner shall be obliged to render a decision on said claim within sixty (60) days of the date of said certification. Should the Owner fail to render its decision within the aforementioned sixty (60) day period, its decision will not be a condition precedent to any further action on the part of the claimant.
- c. There shall be no added compensation paid for delay to the Contractor unless the Owner causes said delay by a material breach of this Contract, and compliance with the foregoing notice provisions shall be a condition precedent to the prosecution of any such claim. In any claim for delay except for "Excusable Delays and Extensions of Time" as defined in the GENERAL CONDITIONS SECTION "TERMINATION"; "DELAYS AND EXTENSIONS"; "LIQUIDATED DAMAGES" wherein it is alleged that the Contractor's equipment was caused to remain idle, only one half of the prevailing rental rates for use of said equipment will be considered as damages for idled equipment in order to allow for the absence of fair wear and tear, which is allowed for in prevailing rental rates for equipment usage.
- d. Claims for additional compensation for extra work, due to alleged errors in ground elevations, contour lines, or bench marks, will not be considered unless accompanied by certified survey data, made prior to the time the original ground was disturbed, clearly showing that errors exist which resulted, or would result, in handling more material, or performing more work, than would be reasonably estimated from the Drawings and maps issued.
- e. If, on the basis of the available evidence, the Owner determines that an adjustment of the Contract Price and/or Time is justifiable, the procedure shall be as provided in Sections - "CHANGES IN THE WORK" or "TERMINATIONS; DELAYS AND EXTENSIONS; LIQUIDATED DAMAGES" of the GENERAL CONDITIONS.
- f. In the event of an unfavorable decision by the Owner, the Contractor shall have the right to contest said decision as provided for under the provisions of this Contract.

114 NO OPTIONS PAID

It shall be clearly understood that there will be no payment for materials incorporated into the work (other than that shown on the Contract Drawings or specified) unless ordered by the Engineer.

115 TIME AND MATERIALS WORK NOTIFICATION

Should the Contractor perform work in accordance with the General Conditions, "CHANGES IN THE WORK", he shall give a minimum of 24 hours advance written notice prior to his anticipated beginning any work on a Cost-Plus Basis, to the Owner and specifically the Town Engineer.

116 TERMINATION; DELAYS AND EXTENSIONS; LIQUIDATED DAMAGES

- a. Termination of Contract. For its own convenience the Owner may, at any time prior to the issuance of a Notice to Proceed, void the Contract by giving unequivocal and unconditional written notice of such avoidance to the Contractor and in the event of such avoidance the Owner will not be liable to the Contractor for any claims or losses including anticipated loss of profit and monies expended in anticipation of performance under the Contract.

At any time subsequent to the Notice to Proceed the Owner may, at its own convenience, terminate the Contract by giving unequivocal and unconditional written notice of such termination to the Contractor. In the event of such termination by the Owner, the Owner shall be responsible to the Contractor for the following monies only, which monies shall be subject to legitimate charges of the Owner against the Contractor:

1. All reasonable costs incurred by the Contractor in performance of or in anticipation of performance of the Contract provided the Contractor shall take all reasonable steps to mitigate such damages including the return and/or re-sale of materials ordered; and
2. On Lump Sum projects, a mark-up of 10% for profit and 10% for overhead on the reasonable cost of the work that is completed and in place in accordance with the Contract Drawings and Specifications will be allowed. On unit price contracts, allowances for profit and overhead shall be considered to have been included in each of the Contractor's original unit price bid. The Contractor shall remain responsible for the work completed, in accordance with the Contract provisions.

Should any work under this contract be subject to, or terminated by the action of any third party, governmental unit or court due to any ecological or other reason the rights of the Contractor to recover from the Owner shall be determined as set forth above.

The Owner may give notice in writing to the Contractor and his Surety of any material breach of the Contract by the Contractor to include but not be limited to any of the following:

- (a) Failure to begin the work under the Contract within the time specified.
- (b) Failure to perform the work with sufficient workmen, equipment or materials to insure the prompt completion of said work.
- (c) Unsuitable performance of the work or failure to perform anew such work as shall be rejected as defective and unsuitable.
- (d) Neglecting or refusing to remove material rejected as defective and unsuitable.
- (e) Discontinuing the suitable prosecution of the work for a period of 72 hours, excluding Sundays and holidays without written authorization of the Engineer.
- (f) Failure to commence discontinued work within 48 hours after notice to resume (excluding Sundays and holidays).
- (g) Becoming insolvent or declared bankrupt or commits any act of bankruptcy or insolvency.
- (h) Allowing any final judgment to stand against him unsatisfied for a period of ten (10) calendar days.
- (i) Making any assignment for the benefit of creditors.
- (j) Violating any covenants contained in the Contract Documents.
- (k) Failure to eliminate unsafe conditions within 12 hours.

The Contractor or Surety within a period of ten (10) calendar days after such notice shall take all practical action to correct said material breach. Should said action fail to meet with the approval of the Owner, the Owner may, at its discretion, order the Surety to complete the work or, without violating the Contract, take the prosecution of the work out of the hands of said Contractor and Surety.

The Owner may appropriate or use any or all materials and equipment on the ground as may be suitable and acceptable

and may enter into an agreement, either by negotiation or public letting, for the completion of said Contract according to the terms and provisions thereof, or use such other methods or combinations thereof, as in its opinion shall be required or desirable for the completion of said Contract in an acceptable manner. All costs and charges incurred by the Owner together with the cost of completing the work under Contract shall be deducted from any monies due or which may become due said Contractor. In case such expense shall exceed the sum which would have been payable under the Contract, then the Contractor and the Surety shall be liable and shall pay to the Owner the amount of said excess.

- b. Excusable Delays and Extensions of Time. The right of the Contractor to proceed shall not be terminated nor shall the Contractor be charged with liquidated damages for any delays in the completion of the work due:
 1. To any acts of the Government, including controls or requisitioning of materials, equipment, tools, or by labor by reason of war, National Defense, or any other national emergency.
 2. To any acts of the Owner caused an injunction or litigation against said Owner, by a third party.
 3. To causes not reasonably foreseeable by the parties to this Contract at the time of the execution of the Contract which are beyond the control and without the fault or negligence of the Contractor, including, but not restricted to, acts of God or of the public enemy, acts of another Contractor in the performance of some other Contract with the Owner, fires, floods, epidemics, quarantine, restrictions, strikes, freight embargoes, and weather of unusual severity such as hurricanes, tornadoes, cyclones and other extreme weather conditions; and
 4. To any delay of any Subcontractor occasioned by any of the causes specified in subparagraphs 1, 2 and 3 of this paragraph "b".

Provided, however, that the Contractor promptly notify the Owner within ten (10) days in writing of the cause of the delay. Upon receipt of such notification, the Owner shall ascertain the facts and the cause and extent of delay. If, upon the basis of the Facts and the terms of this Contract, the delay is properly excusable, the owner shall extend the time for completing the work for a period of time commensurate with the period of excusable delay.

No claim for damages or any claim other than for an extension of time as herein provided shall be made or asserted against the Owner or Town by reason of any delay.

- c. Liquidated Damages for Delay. If the work is not completed within the time stipulated in Section - TIME OF COMPLETION under SPECIAL CONDITIONS, including any extensions of time for excusable delays as herein provided, the Contractor shall pay to the Owner as fixed, agreed, and as liquidated damages (it being impossible to determine the actual damages occasioned by the delay) for each calendar day of delay, until the work is completed, the amount as set forth in Section - LIQUIDATED DAMAGES under SPECIAL CONDITIONS and the Contractor and his sureties shall be liable to the Owner for the amount thereof. Neither permission given by the Owner for the Contractor to continue the work after the time fixed for completion, nor the inspection and acceptance of such work, shall be deemed a waiver on the part of the Owner of any of his rights under this Contract.

117 ENGINEER'S AUTHORITY

The Engineer will decide all questions which may arise in relation to the work and the construction thereof. The Engineer's estimates and decisions shall be final and conclusive, except as herein otherwise expressly provided. In case any question shall arise between the parties hereto relative to said Contract, the determination or decision of the Engineer shall be a condition precedent to the right of the Contractor to receive any money or payment for work under this Contract affected in any manner or to any extent by such question.

118 TECHNICAL SPECIFICATIONS AND CONTRACT DRAWINGS

Anything mentioned in the Technical Specifications and not shown on the Contract Drawings or shown on the Contract Drawings and not mentioned in the Technical Specifications shall be of like effect as if shown on or mentioned in both. In case of difference between the Contract Drawings and Technical Specifications, the Technical Specifications shall govern. In case of any discrepancy within the Contract Drawings or within the Technical Specifications, the matter shall be immediately submitted to the Owner without whose decision said discrepancy shall not be adjusted by the Contractor, save only at his own risk and expense.

119 REQUESTS FOR SUPPLEMENTARY INFORMATION

It shall be the responsibility of the Contractor to make timely requests of the Owner for any additional information not already in his possession which should be furnished by the Owner under the terms of this Contract, and which he will require in the planning and execution of the work. Such

requests may be submitted from time to time as the need is approached, but each shall be filed in ample time to permit appropriate action to be taken by all parties involved so as to avoid delay. Each request shall be in writing, and list the various items and latest date by which each will be required by the Contractor. The first list shall be submitted within two (2) weeks after Contract award and shall be as complete as possible at that time. The Contractor shall, if requested, furnish promptly any assistance and information the Engineer may require in responding to these requests of the Contractor. The Contractor shall be fully responsible for any delay in his work or to others arising from his failure to comply fully with the provisions of this Section.

120 SHOP DRAWINGS

Shop drawings are required for all manufactured items. In the case of reinforced concrete, details of reinforcing bars and form construction and materials shall be submitted in the same manner as shop drawings.

- a. All required shop drawings, machinery details, layout drawings, working drawings, material and equipment descriptions, etc., shall be submitted to the Engineer in three (3) copies for review sufficiently in advance of requirements to afford ample time for checking, including time for correcting, resubmitting and rechecking if necessary. Two (2) weeks should be allowed for checking from the date of receipt by the Engineer. The Contractor, with the approval of the Engineer, may submit manufacturer's literature as a substitute for, or supplement to, the shop drawings, etc. The minimum size for any submission shall be 8-1/2" x 11" and the maximum size shall be 24" x 36".
- b. No construction, purchase, delivery, installation or work shall be done or made on any part or feature of this Contract which is dependent upon shop drawing review, until such review has been received from the Engineer. If the Contractor proceeds without reviewed shop drawings, it shall be at his own risk. No claim by the Contractor, for extension of the Contract time will be granted by reason of his failure in this respect.
- c. Shop drawings, etc., or printed matter shall give all dimensions, sizes, etc. to enable the Engineer to determine suitability of the construction, installation, material or layout for the purposes intended. Where needed for clarity, the drawings shall include outline, sectional views and detailed working dimensions and designations of the kind of material, machine work, finish, etc., required. The drawings to be submitted shall be coordinated by the Contractor with any other drawings previously reviewed, with the design and function of any equipment or structure and the Contract Drawings.

- d. By submitting shop drawings, etc., the Contractor thereby represents that he has determined and verified all field measurements, field construction criteria, materials, catalog numbers and similar data, or will do so and that he has checked and coordinated each shop drawing, etc. with the requirements of the work and of the Contract Documents.
- e. If any drawings show variations from the requirements of the Contract because of standard shop practice and/ or other reasons, the Contractor shall make specific mention of such variation in his letter of transmittal in order that, if acceptable, suitable action may be taken for proper adjustment of the contract price and/ or time; otherwise, the Contractor will not be relieved of the responsibility for executing the work in accordance with the Contract even though the drawings have been reviewed.
- f. After review, the submittals will be stamped "Approved" "Approved as Noted," "Resubmit" or "Disapproved." Two (2) prints of "Approved" or "Approved as Noted" drawings will be returned to the Contractor for his use and distribution to his suppliers and/or Subcontractors. In the case of those stamped "Resubmit" or "Disapproved" two (2) prints will be returned to the Contractor who shall make all indicated corrections and resubmit (3) prints.
- g. In any submission which is noted as "Approved" or "Approved as Noted," the review shall not extend to details or dimensions and shall not relieve the Contractor from his responsibility for compliance with the Contract Drawings and specifications.
- h. When the Contractor proposes a revision to a previously submitted shop drawing, etc., three (3) copies shall be resubmitted for review. This resubmittal shall clearly indicate, in a revision block, the date, description and location of the revision. The letter of transmittal shall state the reasons for the revision.
- i. The Contractor shall furnish as many copies of the submittals as is necessary for the proper coordination of the work, and shall maintain a complete set of the reviewed submissions at the site of the work at all times.
- j. Upon the final acceptance of the project, the Contractor shall, on request, furnish the Owner with a complete set of shop drawing tracings or reproducible cloth reproductions of the shop drawing tracings.
- k. There will be no direct payment made for any of the above submittals, or reproducible drawings if required, but the cost thereof shall be considered as included in the general cost of the work.

121 SAMPLES, CERTIFICATES AND TESTS

- a. The Contractor shall submit all samples, materials, certified test reports, materials certificates, certificates of compliance, affidavits, etc., as called for in the Contract Documents or required by the Engineer, promptly after award of the Contract and acceptance of the Contractor's bonds. No such materials and/or equipment, etc., shall be manufactured or delivered to the site, except at the Contractor's own risk, until the required samples/certificates/tests/etc., have been approved in writing by the Engineer. Any delay in the work caused by late or improper submission of the above for approval shall not be considered just cause for an extension of the Contract time.
- b. Samples. Unless otherwise specified, the Contractor shall furnish the required samples without charge, and shall provide every facility for the securing of material samples. He shall provide means and assist in the verification of all scales, measures and other devices which he operates. Samples to be submitted shall be taken by the Engineer or a laboratory approved by the Owner, unless otherwise specified. All materials being used shall be subject to resampling and testing at any time during their preparation and/or use. All samples submitted by the Contractor shall be properly identified to include, but not be limited to, the project name, project number, item number and description of material, name of the producer, place of origin, and other detailed information which will assist the Engineer passing upon the acceptability of the sample. Certified test reports, materials certificates and/or certificates of compliance required to be submitted with the samples or if permitted in lieu of samples, shall conform to the requirements stated hereafter.
- c. Certified Test Report. A certified test report shall be a document containing a list of the dimensional, chemical, metallurgical, electrical and physical results obtained from an actual test of the materials involved, and shall certify that the materials meet the requirements of the Contract Drawings and specifications, and shall also include the following information:
 - 1. Item number and description of material;
 - 2. Date of manufacture;
 - 3. Date of testing;
 - 4. Name or organization to whom the material is consigned;
 - 5. Quantity of material represented, such as batch, lot, group, etc.
 - 6. Means of identifying the consignment, such as label, marking, lot number, etc.
 - 7. Date and method of shipment;
 - 8. Name of organization performing tests.

The certified test report shall be signed by an authorized and responsible agent for the organization manufacturing the material, and it shall be notarized.

- d. Materials Certificate. A materials certificate shall be a document certifying that the materials, components and equipment furnished; conform to all requirements of the Contract Drawings and specifications. The document shall also include the following information:

1. Project to which the material is consigned.
2. Name of Contractor to whom material is supplied
3. Item number and description of material.
4. Quantity of material represented by the certificate.
5. Means of identifying the consignment, such as label, marking, lot numbers, etc.
6. Date and method of shipment.

The materials certificate shall be signed by an authorized and responsible agent for the organization supplying the material, and it shall be notarized.

- e. Certificate of Compliance. A certificate of compliance shall be a document certifying that the materials, components and equipment covered by the previously submitted certified test report and materials certificate, have been installed in the work and that conform to all the requirements of the Contract Drawings and specifications. The following information shall also be required on the document:

1. Project number;
2. Item number and description of material;
3. Quantity represented by the certificate;
4. Name of manufacturer.

The certificate of compliance shall be signed by an authorized and responsible agent for the prime Contractor, and shall be notarized.

- f. Tests. Tests as required by the Specifications will be made in accordance with the latest revision to the standard method in effect at the time of bidding of the American Society of Testing Materials, the New York State Department of Transportation, the American Water Works Association, the American Association of State Highway and Transportation Officials or any other organization that is

recognized as an authority on a particular material unless otherwise specified on the Contract Drawings or Special Conditions. Representative preliminary samples of the material proposed for use shall be submitted, without charge, by the Contractor or producer for examination and tested in accordance with specified methods. All materials being used are subject to test or rejection at any time during their preparation and use. Materials will be rejected by the Engineer whenever, in his judgment, they fail to meet the requirements of the specifications.

The Owner reserves the right to retest all materials which have been tested and accepted at the source of supply, after the same have been delivered, and to reject all materials which, when retested, do not meet the requirements of the specifications.

- g. Approval/Acceptance. Approval of any materials shall be general only and shall not constitute a waiver of the Owner's right to demand full compliance with Contract Requirements. After actual deliveries, the Engineer will have such check tests made as he deems necessary in each instance and may reject materials and equipment and accessories for cause, even though such materials and articles have been given general approval. If materials, equipment or accessories which fail to meet check tests have been incorporated in the work, the Engineer will have the right to cause their removal and replacement by proper materials or to demand and secure such reparation by the Contractor as is equitable.

The Engineer may accept a material or combination of materials and therefore waive noncomplying test results provided that all of the following conditions are met:

1. Results of prior and subsequent series of tests of the material or materials from the same source or sources are found satisfactory.
2. The incidence and degree of nonconformance with the specification requirements are, in the Engineer's judgment within reasonable and practical limits.
3. The Contractor has diligently exercised material controls consistent with good practices in the Engineer's judgment.
4. No adverse effect on the value or serviceability of the completed work could result.

The Engineer may at his discretion waive testing of extremely minor quantities of material when such material is obtained from sources that are prevalently on test.

h. Costs. Except as otherwise specifically stated in the Contract, the costs of sampling and testing will be divided as follows:

1. The Contractor shall furnish without extra cost, including packing and delivery charges, all samples required for testing purposes, including those samples taken on the project by the Engineer. The Owner shall pay all other testing costs of said samples.
2. The Contractor shall assume all costs of retesting materials which fail to meet Contract requirements.
3. The Contractor shall assume all costs of testing materials offered in substitution for those found deficient or for those specified.

122 MATERIALS AND WORKMANSHIP

- a. Unless otherwise specifically provided for in the Technical Specifications, all workmanship, equipment, materials and articles incorporated in the work shall be new and the best grade of the respective kinds for the purpose. Where equipment, materials, articles or workmanship are referred to in the Technical Specifications as "equal to" any particular standard, the Engineer shall decide the question of equality.
- b. All work performed and all materials furnished shall be, in conformity with the lines, grades, cross sections dimensions and material requirements, including tolerances shown on the Contract Drawings or indicated in the Specifications.
- c. The Contractor shall furnish to the Owner for approval the manufacturer's detailed specifications for all machinery, mechanical and other special equipment, which he contemplates installing together with full information as to type, performance characteristics and all other pertinent information as required, and shall likewise submit for approval as required full information concerning all other materials or articles which he proposes to incorporate in the work. See Section - SAMPLES, CERTIFICATES AND TESTS.
- d. Machinery, mechanical and other equipment, materials or articles installed or used without such prior approval shall be at the risk of subsequent rejection.
- e. Materials specified by reference to the number or symbol of a specific standard, such as an ASTM Standard, a Federal Specification or other similar standard, shall comply with requirements in the latest revision thereof and any amendment or supplement thereto in effect on the date of the Invitation for Bids, except as limited to type,

class or grade, or modified in such reference. The standards referred to, except as modified in the Technical Specifications, shall have full force and effect as though printed therein.

- f. The Contractor shall employ only competent and skillful men to do the work and whenever the Engineer shall notify the Contractor, in writing, that any man on the work is, in his opinion, incompetent or disorderly, the Contractor shall forthwith remove such person and shall not again employ him on any part of the work without the written consent of the Engineer.
- g. The Owner may stop any worker, any part of the work under the Contract if the methods or conditions are such that unsatisfactory work might result, if improper materials or workmanship is being used, or unsafe conditions exist. Any action by the Owner under this provision shall not be deemed a cause of delay and no extensions of permitted time will be granted because of such action.
- h. In the event the materials furnished or the work performed deviates from the requirements of the Contract Drawings and Specifications, but, in the opinion of the Owner, constitutes substantial performance, the Owner may accept the same. Should the deviation in question result in a savings to the Contractor the Owner will be entitled to a credit in the full amount of said savings. Should the deviation in question result in an additional cost to the Contractor, the Owner will not be liable to the Contractor for such additional cost.

If the materials or the finished product in which the materials are used or the work performed are not in conformity with the Contract Drawings and Specifications and have resulted in an inferior or unsatisfactory product, the work and materials shall be removed and replaced or otherwise corrected by and at the expense of the Contractor.

123 PERMITS AND CODES

- a. The Contractor shall give all notices required by and shall observe and comply with all Federal and State laws and Local by-laws, ordinances and regulations in any manner affecting the conduct of the work, and all such orders or decrees as may exist at present and those which may be enacted later, of bodies or tribunals having any jurisdiction or authority over the work. The Contractor shall indemnify and save harmless the Owner and Engineer and all of its officers, agents and servants against any claim or liability arising from or based on the violation of any such law, bylaw, ordinance, regulation, order or decree, whether by himself or his employees. All construction, work and/or utility installations shall comply with all applicable ordinances and/or codes including any and all written waivers thereto.

Before commencing any work, the Contractor shall examine the Contract Drawings and Specifications for compliance with applicable ordinances, codes, etc. and shall immediately report any discrepancy to the Owner. Where the requirements of the Contract Drawings and Specifications fail to comply with such applicable ordinances, codes, etc. the Owner will adjust the Contract by Change Order to conform to such ordinances, codes, etc., (unless waivers in writing covering the differences have been granted by the governing body or department) and make appropriate adjustment in the Contract Price.

Should the Contractor fail to observe the foregoing provisions and proceed with the construction or work and/or install any utility at variance with any applicable ordinance, code, etc., including any written waivers (notwithstanding the fact that such installation is in compliance with the Contract Drawings and Specifications), the Contractor shall remove such work without cost to the Owner, but a Change Order will be issued to cover only the excess cost the Contractor would have been entitled to receive if the change had been made before the Contractor commenced work on the items involved.

- b. Unless otherwise specified, the Contractor shall at his own expense, secure and pay to the appropriate department of the Local/State/Federal Government the fees or charges for all permits including but not limited to those required for the making of water taps and the supplying of any equipment required by the Regulations of the Consolidated Water District, Electrical Underwriters permits, and any other permits required by the regulatory body or any of its agencies.
- c. The Contractor shall comply with applicable Local/ State/Federal laws, ordinances, codes, etc. governing noise, the disposal of surplus excavation, materials, debris and rubbish on or off the Project Area and commit no trespass on any public or private property in any operation due to or connected with the work under this Contract.

124 CARE OF WORK

- a. The Contractor shall be responsible for the proper care and protection of all materials delivered and work performed until completion and final acceptance, whether or not the same has been covered in whole or in part by payments made by the Owner.

Materials shall be stored so as to insure the preservation of their quality and fitness for the work and shall be located so as to facilitate prompt inspection. When considered necessary, they shall be placed on wooden platforms or other hard, clean surfaces and not on the ground, and when directed, shall be placed in weatherproof buildings.

Stored materials, even though approved before storage, shall be inspected prior to their use in the work and shall meet the requirements of the specifications at the time it is proposed to use them.

- b. The Contractor shall at his sole expense and without any additional cost to the owner provide watchmen and/or other security measures as may be reasonably required to properly protect and care for materials and work completed, and to otherwise prevent property damage and/or personal injury.
- c. In an emergency affecting the safety of life or property, including adjoining property, the Contractor, without special instructions or authorization from the Owner, is authorized to act at his discretion to prevent such threatened loss or injury, and he shall so act. He shall likewise act if instructed to do so by the Owner. Any compensation claimed by the Contractor on account of such emergency work will be reviewed by the Town Engineer to determine its validity. If compensation is determined to be valid then it will be determined by the Owner as provided in the Section - CHANGES IN THE WORK under GENERAL CONDITIONS.
- d. The Contractor shall avoid damage as a result of his operations to existing sidewalks, streets, curbs, pavements, utilities (except those which are to be replaced or removed), adjoining property, etc., and he shall at his own expense completely repair any damage thereto caused by his operations. If any damage is not repaired or acceptable arrangements for repair are not made within a reasonable period of time, the Commissioner may act to repair such damage by Town forces or using another contractor employed for that purpose, and the costs of such repair shall be deducted from any payments due the Contractor. If a damage claim has been referred by the Contractor to his insurance company, such referral shall in no way relieve the Contractor of his responsibilities.
- e. The Contractor shall shore-up, brace, underpin, secure and protect as may be necessary, all foundations and other parts of existing structures adjacent to, adjoining, and in the vicinity of the site, which may be in any way affected by the excavations or other operation connected with the construction of this Contract. The Contractor shall be responsible for the giving of any and all required notices to any adjoining or adjacent property owner or other party before the commencement of any work. The Contractor shall indemnify and save harmless the Owner, the Town and the Engineer from any damages on account of settlements or the loss of lateral support or adjoining property and from all loss or expense and all damages for which the Owner, the Town and the Engineer may become liable in consequence of such injury or damage to the work or adjoining and adjacent structures and/or their premises.

125 ACCIDENT PREVENTION

- a. The Contractor shall exercise proper precautions and safety measures at all times for the protection of persons and/or property and shall be responsible for all injuries and/or damages to all persons and/or property, either on or off the site, which occur as a result of his prosecution of the work under this Contract. The safety provisions of all applicable Local/State/Federal laws and building and construction codes shall be observed and the Contractor shall take or cause to be taken such additional safety and health measures as the Owner may determine to be reasonably necessary.

Machinery equipment and trucks shall be properly guarded, and operational hazards shall be eliminated in accordance with the provisions and intent of the latest rules and regulations of OSHA, to the extent that such provisions are not in contravention of applicable law. The Contractor's attention is also called to the Section - SAFETY PROVISIONS of the GENERAL CONDITIONS.

- b. The Contractor shall maintain an accurate record of all cases of death occupational disease and injury requiring medical attention or causing loss of time from work arising out of and in the course of employment of the work under this Contract in accordance with the requirements of the applicable State/Local/ Federal regulations. The Contractor shall promptly furnish the Owner with reports concerning these matters.
- c. The Contractor shall indemnify and save harmless the Owner, Town of Greenburgh and the Engineer from any and all claims for damages resulting from personal injury death and/or property damage suffered or alleged to have been suffered by any person as a result of any work conducted under this Contract. See also the Section INDEMNITY CLAUSE of the GENERAL CONDITIONS.

126 SANITARY FACILITIES

The Contractor shall furnish, install, and maintain ample sanitary facilities for the workmen. As the needs arise, a sufficient number of enclosed temporary toilets shall be conveniently placed as required by the Health/Sanitary Codes of the Local/State/Federal Government. Drinking water shall also be provided from an approved source so piped or transported as to keep it safe and fresh and served from single service containers or satisfactory types of sanitary drinking stands or fountains. All such facilities and services shall be furnished in strict accordance with existing and governing health/sanitary regulations.

127 USE OF PREMISES

- a. The Contractor shall confine his equipment, storage of materials, and construction operations to the Contract Limits as shown on the Drawings and as prescribed by ordinances or permits, or as may be desired by the Owner, and shall not unreasonably encumber the site or public rights of way with his materials and construction equipment.
- b. The Contractor shall comply with all instructions of the Owner, Engineer and the ordinances, codes, etc., of the Local/State/Federal Government, regarding signs, advertising, traffic, fires, explosives, danger signals, barricades, etc.

128 REMOVAL OF DEBRIS, CLEANING, ETC.

The Contractor shall, periodically or as directed during the progress of the work, remove and legally dispose of all surplus excavated material and debris, and keep the Project Area and public rights of way reasonably clear. Upon completion of the work, prior to final inspection, he shall remove all temporary construction facilities, debris and unused materials provided for the work, and restore the whole site of the work and public rights of way to a condition satisfactory to the Engineer. Trash burning on the site of the work will be subject to prior approval of the Owner and existing Local/State/Federal regulations.

The cost of all required clean-up shall be included in the various prices bid under this Contract.

129 LAYOUT OF WORK

The Contractor shall perform all layout work necessary for the satisfactory execution of the construction as shown on the Contract Drawings and all costs in connection therewith shall be included in the contract price.

The Contractor shall employ competent personnel and all work shall be subject to the approval of the Engineer.

The Contractor shall be held responsible for the protecting and safe guarding of all control points and bench marks set by the Engineer and his own forces. Any replacement or reestablishment of control points or bench marks by the Engineer, shall be at the expense of the Contractor. The required horizontal and vertical control necessary to perform this work is furnished on the Contract Drawings.

130 BLASTING

If explosives are used all requirements for transportation, use and storage of Local, State and Federal laws and regulations must be complied with and all necessary permits and licenses obtained by the Contractor at his expense. Permits and licenses must be shown to the Engineer on request.

Explosives must be carefully transported, stored, handled and used. The Contractor will keep on the job only such quantities of explosives as may be needed for the work underway and only during such time as they are being used. Explosives shall be stored in a secure manner in locked containers and separate from all tools. Caps and detonators shall be stored separately from other explosives. When the need for explosives is ended all such material remaining on the job shall be promptly removed from the premises. Care must be taken that no explosives, caps or detonators are stolen or get into the hands of unauthorized persons or left unguarded where they may cause accidents.

An accurate blasting log must be maintained continuously for the duration of the Contract. The log shall record, for each shot the location, amount of holes, depth, spacing, amount of explosive per hole number of caps used and the exact date and time of the blast. In addition, a sketch showing displacement of direct and delay caps for each shot shall be recorded.

Explosives shall be such power and placed and used in such quantities and positions as will not make the excavation unduly large, nor shatter unnecessarily the rock upon or against which the main or structure is to be built, nor injure adjacent persons or property, those portions of the new work or structure as may already be in place or other adjacent pipes, ducts or other structures. The quantity of explosives fired at one blast must be small enough and the time for blasting selected to avoid undue annoyance to persons owning or occupying premises near the work.

The rock must be completely matted when blasts are fired to prevent damage or injury to persons or property or the scattering of broken fragments on the adjacent ground.

Adequate warning shall be given all persons in the vicinity before any blast is discharged.

When blasting is required, the operation shall be conducted with such care as not to cause damage to any of the existing underground utilities. Should such occur, the cost of repairs shall be the sole responsibility of the Contractor.

When blasting for trench excavation, each shot sequence shall begin sufficiently ahead of completed work to prevent damage to the completed work which must be properly protected prior to each shot.

The provisions herein shall apply where soil formation resembles rock, whether in trench, structure or general excavation, even if it is of such a nature that it is not classified and paid for as rock excavation, and if so ordered by the Engineer, will apply to openings cut through masonry, nested boulders or other materials not herein classed as rock.

In areas where the proposed construction is built against the face of rock excavation, all loosened or shattered portions of the rock must be completely removed by barring, wedging or other approved means so the masonry can be built firmly in contact with solid rock.

The Contractor shall notify each public utility or others having structures in proximity to the site, and others who may be affected, of his intention to use explosives. Said notice shall be given in accordance with the applicable regulations therefore and sufficiently in advance to enable the involved agencies/companies/persons and the Contractor to take such steps as may be necessary to protect life and property. Such notice shall not in any way relieve the Contractor of responsibility for any damage resulting from his blasting operations.

When in sufficiently close proximity to the existing gas, water, sanitary, storm, subway or other utilities and structures and all services connected thereto, the Contractor shall remove the rock by methods other than blasting, if necessary, and ordered by the Engineer in order to protect said utilities and their services from damage. Approved methods other than blasting are barring and wedging, jack hammer, drilling, rock jacks or other such hand or machinery methods which will not damage the adjacent utility. No explosives shall be brought into, stored or used on the site of any job by the Contractor unless and until he shall have furnished the Engineer with a satisfactory certificate of insurance showing that the risks arising from the presence of and use of explosives and from blasting are included within the insurance provided by the Contractor to secure his obligations to the Owner. Insurance should also cover damage to any underground utilities or other underground facilities.

131 INSPECTION/ACCEPTANCE OF THE WORK

All materials and workmanship shall be subject to inspection, examination or test by the Owner and the Engineer to determine the acceptability of the work at any and all times during manufacture or construction and at any and all places where such manufacture or construction is carried on and the Contractor shall provide proper facilities for such access and inspection. The Owner or Engineer shall have the right to reject defective material and workmanship or require its correction. The Owner or Engineer shall have the right to reject materials which have not been approved prior to incorporation in the work, and the right to reject work that has been performed without inspection. Rejected materials shall be removed and

replaced without charge. Rejected workmanship shall be corrected if possible to the Engineer's satisfaction without additional charge. If in the opinion of the Engineer correction is not feasible, or if correction has been attempted but it not satisfactory to the Engineer, the work must be removed and replaced without additional charge. If the Contractor fails to proceed at once with the correction or replacement of rejected workmanship or defective material, the Owner may by contract or otherwise have the defects remedied or rejected materials removed from the Project Area and charge the cost of the same against any monies which are due or may become due the Contractor, without prejudice to any rights or remedies of the Owner.

Neither inspection, testing, approval nor acceptance of the work in whole or in part by the Owner or its agents shall relieve the Contractor or his sureties of the full responsibility for materials furnished or work performed not in strict accordance with the Contract.

The assignment of a part time Inspector to this project will in no way relieve the Contractor of the requirement to comply with all of the specifications.

Where the Contractor has been directed by the Owner or Engineer to leave certain items of work exposed for inspection, and he fails to do so, he will be required to uncover such work at his own expense.

132 FINAL INSPECTION

When the improvements embraced in this Contract are substantially completed, the Contractor shall notify the Owner in writing that the work will be ready for final inspection on a definite date which shall be stated in the notice. The notice will be given at least ten (10) days prior to the date stated for final inspection, and bear the signed concurrence of the representative of the Owner having charge of inspection. If the Owner determines that the status of the improvements is as represented, he will make the arrangements necessary to have final inspection commenced on the date stated in the notice, or as soon thereafter as is practicable.

The inspection party may also include the representative of the Federal Agency, other Governmental Agencies and representatives of each department of the Town having charge of improvements of like character when such improvements are later to be accepted by the Town.

133 INSURANCE

The insurance requirements for this contract are specified in Section E of these documents.

EXHIBIT “B”

FAZE STRUCTURAL ENGINEERS AND DETAILERS, INC

375 West Parisian Way
Westminster, MD 21157
Tel. 410-871-9788
Fax. 410-871-9786

SPECTRASERVE

SUMMARY OF FINDINGS**Final Structural Failure Investigation Report**

**PROJECT: Greenburgh - Irvington Pump Station on Catskill Aqueduct. Contact Tank.
NY**

On August 4, 2003 FAZE Structural Engineers and Detailers, Inc. was hired by Spectraserve for the purpose of investigation of structural integrity and serviceability of the above mentioned facility.

For that purpose FAZE was provided with full set of record drawings made by McLaren P.C. Consulting Engineers (NYPE # 56880) and set of shop drawings for rebar placement prepared by Tadduni Consulting (file no 8/00) revision date 9.20.00

Review of the record drawings by FAZE indicated that design was performed in accordance ACI 318-95 Ultimate Strength Design without provisions for environmental or watertight structures as required by ACI 350R.

In that case design would be 30% deficient without other factors contributing to the failure.

Shop drawings for rebar placement were received by McLaren PC on October 3, 2000 and authorized for fabrication by McLaren on October 9, 2000 by representative of McLaren with initials "D.A.T" with no exceptions taken.

On August 12, 2003 FAZE visited the site. The following is the result of our investigation:

1. Shop drawings review indicated that all reinforcement was done in accordance with the Record drawings, provided by McLaren P.C.
 - Section "B / CT-2" and Section "D / CT-2" indicate # 5 @ 8" c/c in the roof slab bottom layer. Indicated rebars have standard 90deg hooks developed into the wall. (Drawing CT-2, McLaren PC, issue date 3.27.2000)

COMPUTER MODEL:

Computer model of the tank executed by FAZE Structural Engineers and Detailers has following assumptions

- a. Tank was modeled as a cell frame structure with rigid connections between all members with dimensions to centerlines of the walls and slabs.
- b. Self weight of the structure was applied as a gravity load
- c. Mechanical pressure of 1125 psf was applied to all surfaces of the tank (walls, bottom slab and roof slab)
- d. Basic hydrostatic pressure was applied to bottom slab and to the walls
- e. Mechanical pressure and basic hydrostatic pressure on interior walls were disregarded in the computer model (loads balance each other and act in opposite directions)
- f. Tank foundation was modeled as a mat on elastic foundation with modulus of subgrade reaction equal 200pcf
- g. 1'-0 wide strip of the tank in short direction was investigated (67'-0 total span) for combined effect of all applied loads.
- h. Computer model output was read at centerlines of the supporting members and at first yielding support, when structure started to show signs of distress.

Long direction was not considered in calculations due to more favorable boundary condition. (Exterior walls in short directions can be treated as two way slabs with much smaller flexural moment at wall / slab intersection)

Review of the record drawings, Shop drawings and computer model of the tank allowed us to come to the following conclusion:

1. Shrinkage dissipating joints in wall panels (35'-0 max spacing) could not work efficiently due to lack of weak sections. Cutting every other horizontal rebar at the joint along with application of the bond breaker and flat PVC waterstop would control the location of shrinkage cracks and prevent leakage.
2. Construction joint in the top slab does not serve as a shrinkage-dissipating joint. There were no shrinkage control details provided. For that condition Shrinkage Reinforcement would need to be .87in^2 / ft. min. vs. .75in^2 / ft provided by McLaren P.C.
3. Computer model of the tank created by FAZE indicated that the joints between the long (127'-0) walls of the tank and top and bottom slabs were severely under reinforced and undersized.
 - a) Reinforcement is stressed to 39.0 ksi (at service load) vs. 20 ksi allowed at wall to slab joint location (ACI 350R-89 Table 2.6.7(b)) – members in direct tension.
 - b) Slab and wall shear capacity is 8.09 k / ft (at service load) vs. 5.65 k / ft shear in the wall at actual load.
 - c) Crack control parameter "Z" is 172 k / in vs. 115 k / in required for normal exposure (and 95 k/in for severe exposure for environmental structures. (ACI350R-89 Article 2.6.6))

Question of severity of chemical exposure can be debated, however for most favorable condition it was exceeded by 50%
4. Computer model was run with different soil springs ranging from 150pcf to 300pcf. Calculations indicated that softness of the soil spring had a minimal impact on the forces in the model members.

5. Review of the record drawings indicated that bottom roof slab and interior wall reinforcement along the 127' wall would be 43% overstressed provided #5 rebars had standard 90 deg hook. However 12" wall thickness would not allow placement of standard 90 deg hook (# 5 rebar with 90 deg hook would be only 72% developed- see p. 34 of report supporting calculations). That condition alone would allow rebar to develop only $.72 \times 60 \text{ ksi} = 43.2 \text{ ksi}$ at Strength Design or $.72 \times 20 \text{ ksi} = 14.4 \text{ ksi}$ at Working Stress Design.

Coupled with 43% bar direct overstress, that will bring total bar capacity to $.72 \times .57 \times 20 \text{ ksi} = 8.2 \text{ ksi}$ vs.

20 ksi required. That means that slab-wall connection detail is 60% underreinforced.

Therefore roof slab bottom #5 rebar at roof / wall joint was severely overstressed.

Bar could fail in 3 modes:

- bond failure
- Steel yield
- Combination of the above

Therefore critical slab reinforcement was not only overstressed but also underdeveloped.

Development of flexural crack at the roof / wall joint was inevitable.

Our visit to the site and tank inspection confirmed our conclusions:

1. Irregular shrinkage cracks in the top slab spaced at about 10'-0 o.c. were due to lack of correct shrinkage-dissipating joints (Detail D / CT-3 can't be used as shrinkage-dissipating joint due to lack of a weak section)
2. Flexural crack in the top slab along the 127'-0 walls located 4" to 6" from the edge of the slab was in agreement with our numerical analysis. In addition, we received the information from the Crystal Group (contractor, which was involved in the repair efforts earlier) that cracks are running down under the angle of 45 deg., which is the indication that joint failure was from flexural overstress coupled with direct tension action.
3. Leakage through the cold joints (indication of the underdeveloped reinforcement and joint separation) was in agreement with our observation during the drawings review.

Standard Details that would be required.

1. Cold joints between the walls and roof slab had to be moved into the roof slab 3'-0 away from the wall interior face ("0"- Moment Zone). Slab control joint could be placed at that point as well.
2. **Shrinkage dissipating joints had to be provided in the slab and wall details at about 20' to 30' o.c. or**
Shrinkage reinforcement in long direction had to be increased from #5 at 10" c/c to #5 @ 8" c/c
3. **Slab and wall reinforcement along the 127' long walls should be # 6 @ 6" c/c.**
(As= .88 in^2 / ft)
4. In our practice we would recommend the wall and slab thickness for that kind of structure to be 14" min.

5. We would also replace standard 90 deg hook in the top slab with standard 180 deg hook (90 deg hook can not be fully developed within 14" thick slab, nor it can be developed in 12" slab.)

It is my professional opinion that the **original design neglected at least 3 important issues contributing to the structural failure:**

- Reliability coefficient 1.3 required for watertight structures (as recommended by ACI 350R)
in that case dead load **dead load shall be used with L.F. =1.4*1.3 ; mechanical pressure and basic hydrostatic pressure with L.F.= 1.7*1.3 ; direct tension requires additional coefficient 1.65 on top of direct tension calculated at 1.3*D.L. + 1.7* F.L. (fluid load)**
Underestimating of these factors brought level of reinforcement to prohibitively low level
- **Development length for hooked rebars in tension. Hook is 28 % underdeveloped as shown on the drawings.**
- **proper placement of control "cold " joints and shrinkage dissipating joints. Such joints shall be placed at points of "0" flexural stress or in vicinity of these points.**

Sincerely,

Vincent (Vitaly) B. Feygin P.E. – Principal Engineer



EXHIBIT “C”

APPLICATION AND CERTIFICATION FOR PAYMENT

TO OWNER TOWN OF GREENBURGH
 DEPARTMENT OF PUBLIC WORKS
 PO BOX 205
 ELMSFORD, NY 10523
 FROM CONTRACTOR:
 SPECTRASERV, INC.
 75 JACOBUS AVE.
 SOUTH KEARNY NJ 07032

AIA DOCUMENT G702

PAGE ONE OF 1 PAGES

PROJECT: CATSKILL AQUEDUCT

PUMP STATION

CONTRACT #1 - GC

VIA ARCHITECT:

SPECTRASERV, INC.

75 JACOBUS AVE.

SOUTH KEARNY NJ 07032

PROJECT NO.:

PERIOD TO: 08/31/05

PROJECT NOS.: 1

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract Continuation Sheet, AIA Document G703, is attached.

ORIGINAL CONTRACT SUM

Net change by Change Orders

1. CONTRACT SUM TO DATE (Line 1 ± 2)

2. TOTAL COMPLETED & STORED TO

DATE (Column G on G703)

3. RETAINAGE:

\$ 2,789,225.00
\$ 672,785.30
\$ 3,462,010.30
\$ 3,462,010.00

\$ 173,101
\$ _____

\$ 173,100.50
\$ 3,288,909.50

4. Total Retainage (Lines 5a + 5b or

Total in Column I of G703)

5. TOTAL EARNED LESS RETAINAGE

(Line 4 Less Line 5 Total)

6. LESS PREVIOUS CERTIFICATES FOR PAYMENT (Line 6 from prior Certificate)

7. CURRENT PAYMENT DUE

8. RETAINAGE TO FINISH, INCLUDING RETAINAGE

(Line 3 less Line 6)

\$ 3,194,520
\$ 3,194,520
\$ 173,100.80

AMOUNT CERTIFIED \$ _____

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner	\$672,785.30	
Total approved this Month	\$0.00	
TOTALS	\$672,785.30	\$0.00
NET CHANGES by Change Order	\$672,785.30	

A DOCUMENT G702 - APPLICATION AND CERTIFICATION FOR PAYMENT - 1992 EDITION - AIA - © 1992

Users may obtain validation of this document by requesting a completed AIA Document D401 - Certification of Document's Authenticity from the Licensee.

THE AMERICAN INSTITUTE OF ARCHITECTS, 1735 NEW YORK AVE., N.W., WASHINGTON, DC 20006-5292

(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)
 ARCHITECT:
 By: _____ Date: _____

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

ARCHITECT'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on on-site observations and the data comprising the application, the Architect certifies to the Owner that to the best of the Architect's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

Date: 08/31/05
 Steven Wells
 County of Westchester
 Subscribed and sworn to before me this 31st day of August, 2005
 Notary Public: SHAWN M. CSORDOS
 My Commission expires: December 31, 2006
 Notary Public of New Jersey

CONTINUATION SHEET*AIA DOCUMENT G703*

AIA Document G702, APPLICATION AND CERTIFICATION FOR PAYMENT, containing Contractor's signed certification is attached.

In tabulations below, amounts are stated to the nearest dollar.

Use Column I on Contracts where variable retainage for line items may apply.

PAGE OF PAGES

APPLICATION NO: 12

APPLICATION DATE: 08/31/05

PERIOD TO: 08/31/05

ARCHITECT'S PROJECT NO: 1

A ITEM NO.	B DESCRIPTION OF WORK	C SCHEDULED VALUE	D WORK COMPLETED FROM PREVIOUS APPLICATION (D + E)	E	F MATERIALS PRESENTLY STORED (NOT IN D OR E)	G TOTAL COMPLETED AND STORED TO DATE (D+E+F)	H BALANCE TO FINISH (C - G)	I RETAINAGE (IF VARIABLE RATE)
1	TOTALS PER ATTACHED	\$3,462,010.30	\$3,362,652.22	\$99,357.78	\$0.00	\$3,462,010.00	100.00%	\$0.30 5%
	GRAND TOTALS	\$3,462,010.30	\$3,362,652.22	\$99,357.78	\$0.00	\$3,462,010.00	\$1.00	\$0.30

Users may obtain validation of this document by requesting of the licensee a completed AIA Document D401 - Certification of Document's Authenticity

ITEM #	ITEM	UNIT	UNIT PRICE	QUAN	TOTAL PRICE	QUAN. THIS EST.	PAYMENT THIS EST.	PREVIOUS PAYMENTS	PAYMENT TO DATE
1	Bonds & Insurance	LS	\$ 75,000.00	1	\$ 75,000.00	0	\$0.00	\$75,000.00	\$75,000.00
2	Submittals	LS	\$ 15,000.00	1	\$ 15,000.00	0	\$0.00	\$15,000.00	\$15,000.00
3	Surveying Work	LS	\$ 8,000.00	1	\$ 8,000.00	0	\$0.00	\$8,000.00	\$8,000.00
4	Clearing, Grubbing, & Erosion Control	LS	\$ 45,000.00	1	\$ 45,000.00	0	\$0.00	\$45,000.00	\$45,000.00
5	Prep Site - Grading & Fill	LS	\$ 50,000.00	1	\$ 50,000.00	0	\$0.00	\$50,000.00	\$50,000.00
6	Install Temporary Road	LS	\$ 30,000.00	1	\$ 30,000.00	0	\$0.00	\$30,000.00	\$30,000.00
7	Install Elliptical Culvert	LS	\$ 15,000.00	1	\$ 15,000.00	0	\$0.00	\$15,000.00	\$15,000.00
8	Install 20" Water Main	Ft	\$ 200.00	1000	\$ 200,000.00	0	\$0.00	\$200,000.00	\$200,000.00
9	Install 12" Perf. CMP	Ft	\$ 40.00	300	\$ 12,000.00	0	\$0.00	\$12,000.00	\$12,000.00
10	Excavate for CCT	LS	\$ 20,000.00	1	\$ 20,000.00	0	\$0.00	\$20,000.00	\$20,000.00
11	Construct CCT Bottom Slab	CY	\$ 390.00	320	\$ 124,800.00	0	\$0.00	\$124,800.00	\$124,800.00
12	Construct CCT Walls	CY	\$ 390.00	360	\$ 140,400.00	0	\$0.00	\$140,400.00	\$140,400.00
13	Construct CCT Top Slab	CY	\$ 390.00	340	\$ 132,600.00	0	\$0.00	\$132,600.00	\$132,600.00
14	Install CCT Manholes	EA	\$ 1,000.00	6	\$ 6,000.00	0	\$0.00	\$6,000.00	\$6,000.00
15	Install CCT Air Release Valve & Encl.	EA	\$ 2,500.00	2	\$ 5,000.00	0	\$0.00	\$5,000.00	\$5,000.00
16	Install CCT Drain & Valve Pit	LS	\$ 7,500.00	1	\$ 7,500.00	0	\$0.00	\$7,500.00	\$7,500.00
17	CCT Interior & Exterior Coating	SF	\$ 2.00	20000	\$ 40,000.00	0	\$0.00	\$40,000.00	\$40,000.00
18	Excavate for Pump Station	LS	\$ 20,000.00	1	\$ 20,000.00	0	\$0.00	\$20,000.00	\$20,000.00
19	Construct P.S. Footings	CY	\$ 390.00	100	\$ 39,000.00	0	\$0.00	\$39,000.00	\$39,000.00
20	Construct P.S. Slab	CY	\$ 390.00	80	\$ 31,200.00	0	\$0.00	\$31,200.00	\$31,200.00
21	Construct P.S. Ext. Block Walls	SF	\$ 15.00	2400	\$ 36,000.00	0	\$0.00	\$36,000.00	\$36,000.00
22	Construct P.S. Roof	LS	\$ 40,000.00	1	\$ 40,000.00	0	\$0.00	\$40,000.00	\$40,000.00
23	Install P.S. Misc. Metals	LS	\$ 65,000.00	1	\$ 65,000.00	0	\$0.00	\$65,000.00	\$65,000.00
24	Install P.S. Windows	EA	\$ 1,000.00	8	\$ 8,000.00	0	\$0.00	\$8,000.00	\$8,000.00
25	Install P.S. Exterior Doors	EA	\$ 3,000.00	6	\$ 18,000.00	0	\$0.00	\$18,000.00	\$18,000.00
26	Install P.S. Rollup Door	LS	\$ 18,000.00	1	\$ 18,000.00	0	\$0.00	\$18,000.00	\$18,000.00
27	Construct P.S. Int. Block Walls	SF	\$ 10.00	1800	\$ 18,000.00	0	\$0.00	\$18,000.00	\$18,000.00
28	Install P.S. Interior Doors	EA	\$ 1,500.00	8	\$ 12,000.00	0	\$0.00	\$12,000.00	\$12,000.00
29	Install P.S. WCs & Plumbing	LS	\$ 35,000.00	1	\$ 35,000.00	0	\$0.00	\$35,000.00	\$35,000.00
30	Install P.S. HVAC	LS	\$ 46,700.00	1	\$ 46,700.00	0	\$0.00	\$46,700.00	\$46,700.00
31	Install P.S. Chlorine System	LS	\$ 75,000.00	1	\$ 75,000.00	0	\$0.00	\$75,000.00	\$75,000.00
32	Install P.S. Caustic Tank	LS	\$ 60,000.00	1	\$ 60,000.00	0	\$0.00	\$60,000.00	\$60,000.00
33	Install P.S. Caustic System	LS	\$ 55,000.00	1	\$ 55,000.00	0	\$0.00	\$55,000.00	\$55,000.00
34	Install P.S. Chem. Feed Piping	LS	\$ 25,000.00	1	\$ 25,000.00	0	\$0.00	\$25,000.00	\$25,000.00
35	Install P.S. Pumps	EA	\$ 85,000.00	4	\$ 340,000.00	0	\$0.00	\$340,000.00	\$340,000.00
36	Install P.S. Suction Piping (Int.)	LS	\$ 60,000.00	1	\$ 60,000.00	0	\$0.00	\$60,000.00	\$60,000.00
37	Install P.S. Discharge Piping (Int.)	LS	\$ 60,000.00	1	\$ 60,000.00	0	\$0.00	\$60,000.00	\$60,000.00
38	Install P.S. 24" Butterfly Valve (Int.)	EA	\$ 9,000.00	1	\$ 9,000.00	0	\$0.00	\$9,000.00	\$9,000.00
39	Install P.S. 12" Butterfly Valve (Int.)	EA	\$ 7,000.00	4	\$ 28,000.00	0	\$0.00	\$28,000.00	\$28,000.00
40	Install P.S. 14" Butterfly Valve (Int.)	EA	\$ 5,500.00	4	\$ 22,000.00	0	\$0.00	\$22,000.00	\$22,000.00
41	Install P.S. 20" Butterfly Valve (Int.)	EA	\$ 7,000.00	3	\$ 21,000.00	0	\$0.00	\$21,000.00	\$21,000.00
42	Install P.S. 12" Check Valve (Int.)	EA	\$ 6,000.00	4	\$ 24,000.00	0	\$0.00	\$24,000.00	\$24,000.00
43	Install P.S. Surge Valve & Piping	LS	\$ 15,000.00	1	\$ 15,000.00	0	\$0.00	\$15,000.00	\$15,000.00
44	Install Vacuum Priming Pump System	LS	\$ 85,000.00	1	\$ 85,000.00	0	\$0.00	\$85,000.00	\$85,000.00
45	Install P.S. Instrumentation	LS	\$ 200,000.00	1	\$ 200,000.00	0	\$0.00	\$200,000.00	\$200,000.00
46	Pump Station Painting	LS	\$ 40,000.00	1	\$ 40,000.00	0	\$0.00	\$40,000.00	\$40,000.00
47	Tap Aqueduct & Install Suction Riser	LS	\$ 25,000.00	1	\$ 25,000.00	0	\$0.00	\$25,000.00	\$25,000.00
48	Install Priming Manhole & Piping	LS	\$ 21,000.00	1	\$ 21,000.00	0	\$0.00	\$21,000.00	\$21,000.00
49	Install 24" Suction Pipe to Meter Cham	Ft	\$ 300.00	130	\$ 39,000.00	0	\$0.00	\$39,000.00	\$39,000.00
50	Install Meter Chamber & Appurtenances	LS	\$ 35,700.00	1	\$ 35,700.00	0	\$0.00	\$35,700.00	\$35,700.00
51	Install 24" Water Main To & From CCT	Ft	\$ 200.00	140	\$ 28,000.00	0	\$0.00	\$28,000.00	\$28,000.00
52	Install 24" Butterfly Valves (Ext.)	EA	\$ 9,500.00	3	\$ 28,500.00	0	\$0.00	\$28,500.00	\$28,500.00
53	Install 12" Surge Disch. & Drain Pipe	Ft	\$ 150.00	130	\$ 19,500.00	0	\$0.00	\$19,500.00	\$19,500.00
54	Construct Perm. Road/Driveway	SF	\$ 3.50	17600	\$ 61,600.00	0	\$0.00	\$61,600.00	\$61,600.00
55	Install Guide Rails	LS	\$ 11,225.00	1	\$ 11,225.00	1	\$11,225.00	\$0.00	\$11,225.00
56	Install Retaining Wall	LS	\$ 16,000.00	1	\$ 16,000.00	0	\$0.00	\$16,000.00	\$16,000.00
57	Startup & Training for Instrumentation	LS	\$ 7,000.00	1	\$ 7,000.00	0.5	\$3,500.00	\$3,500.00	\$7,000.00
58	Startup & Training for Chlorine System	LS	\$ 7,000.00	1	\$ 7,000.00	0.5	\$3,500.00	\$3,500.00	\$7,000.00
59	Startup & Training for Caustic System	LS	\$ 7,000.00	1	\$ 7,000.00	0.5	\$3,500.00	\$3,500.00	\$7,000.00
60	Startup & Training for Centrifugal Pump	EA	\$ 4,000.00	4	\$ 16,000.00	2	\$8,000.00	\$8,000.00	\$16,000.00
61	Startup & Training for Vacuum Priming	LS	\$ 7,000.00	1	\$ 7,000.00	0	\$0.00	\$7,000.00	\$7,000.00
62	Submit Final O&M Manuals	LS	\$ 5,000.00	1	\$ 5,000.00	1	\$5,000.00	\$0.00	\$5,000.00
63	Prepare As-Built Drawings	LS	\$ 2,500.00	1	\$ 2,500.00	0	\$0.00	\$2,500.00	\$2,500.00
64	Final Grading & Landscaping	LS	\$ 20,000.00	1	\$ 20,000.00	0.25	\$5,000.00	\$15,000.00	\$20,000.00
65	Item 2M - Misc. Earth Excavation	CY	\$ 15.00	0	\$ -	0	\$0.00	\$0.00	\$0.00
66	Item 39 - Furnish & Install Crushed Ro	CY	\$ 25.00	0	\$ -	0	\$0.00	\$0.00	\$0.00
67	Item 5R - Misc. Rock Excavation	CY	\$ 100.00	0	\$ -	0	\$0.00	\$0.00	\$0.00

ITEM #	ITEM	UNIT	UNIT PRICE	QUAN	TOTAL PRICE	QUAN. THIS EST	PAYMENT THIS EST.	PREVIOUS PAYMENTS	PAYMENT TO DATE
68	CO#1 Culvert Piping	LS	\$ 96,350.00	1	\$ 96,350.00	0	\$0.00	\$96,350.00	\$96,350.00
69	CO#2 Meter Pit PRV	LS	\$ 9,069.30	1	\$ 9,069.30	0	\$0.00	\$9,069.00	\$9,069.00
70	CO#3 Discharge Pipe Wall Sleeve	LS	\$ 2,574.65	1	\$ 2,574.65	0	\$0.00	\$2,574.65	\$2,574.65
71	CO#4 Equipment Pads	LS	\$ 3,000.00	1	\$ 3,000.00	0	\$0.00	\$3,000.00	\$3,000.00
72	CO#5 Instrumentation Modifications	LS	\$ 75,253.20	1	\$ 75,253.20	0	\$0.00	\$75,253.20	\$75,253.20
73	CO#6 CCT Ceiling Coating	LS	\$ 42,756.24	1	\$ 42,756.24	0	\$0.00	\$42,756.24	\$42,756.24
74	CO#7 Additional Grating	LS	\$ 34,920.00	1	\$ 34,920.00	0	\$0.00	\$34,920.00	\$34,920.00
75	CO#8 Lump Sum Change Orders	LS	\$ 95,293.60	1	\$ 95,293.60	0	\$0.00	\$95,293.60	\$95,293.60
76	CO#9 Time & Material Change Orders	LS	\$ 134,669.96	1	\$ 134,669.96	0	\$0.00	\$134,669.96	\$134,669.96
77	CO#10 Radio,Scada, Chem Feed Cha	LS	\$ 178,898.35	1	\$ 178,898.35	0.333333	\$59,632.78	\$119,265.57	\$178,898.35
78		LS	\$ -	0	\$ -	0	\$0.00	\$0.00	\$0.00
79		LS	\$ -	0	\$ -	0	\$0.00	\$0.00	\$0.00
80		LS	\$ -	0	\$ -	0	\$0.00	\$0.00	\$0.00
81		LS	\$ -	0	\$ -	0	\$0.00	\$0.00	\$0.00
TOTALS					\$ 3,462,010.30		\$99,357.78	\$3,362,652.22	\$3,462,010.00
5% RETAINED							\$4,967.89	\$168,132.61	\$173,100.50
NET PAYMENT							\$94,389.89	\$3,194,519.61	\$3,288,909.50

- VENDOR 016828 SPECTRASERV INC.

11/04/2005 CHECK 72274

FUND & ACCOUNT	CLAIM#	P.O.#	INVOICE	DESCRIPTION	AMOUNT
H .605.00	0135		12	WRK TO 8/31/05	2,981.64-
H .0789.020.1	0135	040483	12	WRK TO 8/31/05	59,632.78
H .605.00	0134		12A	WRK TO 8/31/05	1,936.25-
H .0789.020.1	0134	002553	12A	WRK TO 8/31/05	38,725.00
			TOTAL		93,439.89

RECEIVED

NOV 7 2005

SPECTRASERV INC.